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NATIONAL LEVEL SCIENCE TALENT SEARCH EXAMINATION

CLASS - 4
Question Paper Code : 1B107

KEY

1. B	2. A	3. B	4. C	5. D	6. C	7. B	8. A	9. C	10. A
11. A	12. D	13. C	14. B	15. D	16. D	17. B	18. B	19. A	20. B
21. B	22. B	23. A	24. D	25. B	26. C	27. B	28. A	29. A	30. A
31. C	32. B	33. A	34. D	35. D	36. A	37. A	38. C	39. C	40. B
41. A	42. A	43. A	44. A	45. D	46. D	47. D	48. C	49. D	50. C
51. D	52. C	53. C	54. D	55. C	56. C	57. C	58. B	59. D	60. D

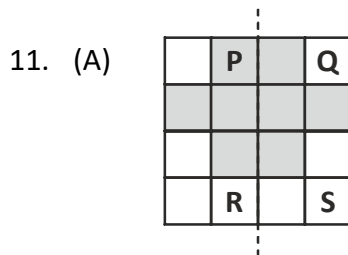### SOLUTIONS

MATHEMATICS

01. (B) 2:25 + 100 minutes = 3:25 + 40 minutes = 4:05

02. (A) English alphabet letters are used to represent Roman numerals are 7

03. (B) The numbers arranged in ascending order are:
(1) 468 ; (2) 486 ; (3) 648 ; (4) 684 ; (5) 846 ; (6) 864
So, the second number is 486.

04. (C) Total number of guests = 75
No. of men = 45
∴ No. of women = 75 − 45 = 30

∴ The required fraction = $\frac{30}{75} = \frac{2}{5}$

05. (D) The difference is 23058.
Digits present are: 2, 3, 0, 5, and 8.
The digit 6 does not occur.

06. (C) 1234 × 90 = 1234 × 5 × 18.

07. (B) 120 ÷ 8 = 15

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8)120(15
  −8
  ──
   40
  −40
  ───
    0
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08. (A) 6 = **3** × 2 ; 15 = **3** × 5
Common factor of 6 & 15 is 3

09.	(C)	The sum is 13000 + 1300 + 13 = 14313
10.	(A)	$\dfrac{8}{10} = \dfrac{4}{5}$

11. (A)

12. (D) A line segment is labeled using two capital letters representing the endpoints, with a straight line drawn above the letters (e.g., $\overline{AB}$).

13. (C) 5 kg 500g + 500g = 6 kg

6 kg − 1 kg = 5 kg

Therefore, the answer is option (C) 5 kg.

14. (B) There are 100 centimeters in 1 meter. The metric system uses a base of 10, so 1 meter equals 100 centimeters.

15. (D)
A = l × b = 10 × 8 = 80 cm² (✗)

A = l × b = 9 × 5 = 45 cm² (✗)

A = l × b = 7 × 6 = 42 cm² (✗)

A = l × b = 12 × 3 = 36 cm² (✓)

16. (D) Perimeter = (18 x 1) cm = 18 cm

17. (B)

(A) Rs.35.60 = 35.60 × 100 paise

= 3560 paise

(B) Rs.20.90 = 20.90 × 100 paise

= 2090 paise

(C) Rs.142.50 = 142.50 × 100 paise

= 14250 paise

(D) Rs.31.61 = 31.61 × 100 paise

= 3161 paise

18. (B) 2:00 : 14:00 pm :: 8:00 : 20:00pm

19. (A)

= 819 ÷ 7 = 117

= ÷ 9 = 117 ÷ 9 = 13

20. (B) 53899 < 54598 < 58455 < 58459

21. (B) 109 is not divisible by 9

30,109 is not a multiple of 9.

22. (B) Total cupcakes sold = 756 + 342 = 1,098

Adding the unsold cupcakes:

1,098 + 128 = 1,226

23. (A) Total trees = 27 × 36 = 972

Trees per garden = 972 ÷ 9 = 108

24. (D) The 10th shape is the star.

25. (B) No. of divisions for 1 litre = 5

Each division measures = 1 l ÷ 5

= 1000 ml ÷ 5 = 200 ml

Capacity of water in the container = 1600 ml

∴ Amount of water needed to fill up the container to 2 l mark

= (2000 − 1600 ml)

= 400 ml

GENERAL SCIENCE

26. (C) Sand is insoluble in water. It sinks to the bottom of the container.

27. (B) Mouth → Foodpipe → Stomach → Small intestine.

28. (A) Tadpole is the larval stage of frog. It undergoes changes to form into an adult frog.

29. (A) The sun gives out heat and light.

30. (A) Fossils are the remains of plants and animals long ago.

31. (C) Lion is a carnivore.

32. (B) The position of the earth at image 2 is tilted towards the sun and is near to the earth. So it is summer in northern hemisphere, at position 1.

33. (A) The process of making food by the plant using sunlight, carbon dioxide from air and water.

34. (D) The more the temperature difference between the water and the room temperature, the higher the rate of evaporation.

35. (D) The rate of evaporation is more from the container which has more exposed surface area and less depth.

36. (A) Nylon is a man made material.

37. (A) A local wind system characterized by a flow from sea to land during the day is called sea breeze.

38. (C) Revolution of the earth around the sun takes one year to complete.

39. (C) Microscope is used to observe microbes or small parts of a cell.

40. (B) Ice is water in the solid state. A solid has a fixed shape and a fixed volume. A solid cannot be compressed

Water vapour is water in the gaseous state. A gas has no fixed shape and no fixed volume. A gas can be compressed

Ice is visible (can be seen) but water vapour is invisible (cannot be seen)

41. (A) The freezing point of pure water is 0°C.

At the freezing point, 0°C, water changes from the liquid state to the solid state.

42. (A) Air has mass and it can be compressed.

43. (A) Incisors are used to cut the food.

44. (A) A dog is a mammal. Mammals have lungs to breathe in oxygen from the air.

Plants have tiny pores called stomata on their leaves or stems to allow air to move in and out or them.

A fish has gills (in a gill chamber) to take in oxygen that has dissolved in the water.

45. (D) Large intestine helps in defecation

46. (D) If all the flowers of a mango tree are removed, the tree will not produce fruits.

47. (D) Translocation is the transport of manufactured food substances such as sugars through the phloem tissue from the leaf to all other parts of the plant.

48. (C) Vein, stomata, lamina, blade are all parts of leaf.

49. (D) Bacteria is the cause for tooth decay

50. (C) During photosyntheses light energy → chemical energy

51. (D) A lizard drops its tail when it is trying to escape.

52. (C) The coconut falls on the ground is due to the gravitational force.

53. (C) A life cycle tells us about the different stages of living things life.

54. (D) Bread is made from cereals of grass plants.

55. (C) During photosynthesis oxygen is liberated and carbon dioxide is used to make food.

CRITICAL THINKING

56. (C)

	House 1	House 2	House 3
Colour	Blue	Red	White
Nationality	Norwegian	Italian	Spanish

57. (C) There are 3 numbers are there between 1 and 5.
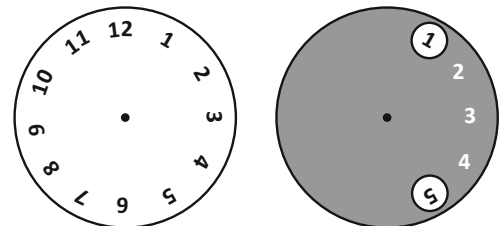
Similarly if first hole is on number 2, the second hole is on number 6. (3,4,5 are middle numbers between 2 and 6)

Option (C) only satisfies the given condition.

58. (B)

Joy
Kittu
Chaitu
Sri
Nani

59. (D) In the absence of air resistance, all objects fall to the ground at the same rate regardless of their height, mass, or shape.

60. (D) The solution to the riddle is a memory.